

## Series TY-B — 80 and 115 K-factor Conventional Sprinklers Special Response, Standard Coverage

### General Description

The Series TY-B, 80 and 115 K-factor, Conventional Sprinklers described in this data sheet are special response - standard coverage, decorative 4 mm glass bulb sprinklers designed for use in accordance with the installation rules recognized by the applicable Approval agency (e.g., VdS). These sprinklers are intended to be installed either pendent or upright, and in either position, they produce a spherical water discharge pattern with approximately 50% of the discharge directed upwards and approximately 50% of the discharge directed downwards.

#### NOTICE

*The Series TY-B Sprinklers described herein must be installed and maintained in compliance with this document, as well as with the applicable standards recognized by the Approval agency, in addition to the standards of any other authorities having jurisdiction. Failure to do so may impair the performance of these devices.*

*The owner is responsible for maintaining their fire protection system and devices in proper operating condition. Contact the installing contractor or product manufacturer with any questions.*

#### IMPORTANT

*Refer to Technical Data Sheet TFP2300 for warnings pertaining to regulatory and health information.*

*Always refer to Technical Data Sheet TFP700 for the "INSTALLER WARNING" that provides cautions with respect to handling and installation of sprinkler systems and components. Improper handling and installation can permanently damage a sprinkler system or its components and cause the sprinkler to fail to operate in a fire situation or cause it to operate prematurely.*

### Sprinkler Identification Numbers (SINs)

TY3641 ..... Conventional 80K  
TY4641 ..... Conventional 115K

### Technical Data

#### Approvals

VdS Approved (CEA 4001)

#### Maximum Working Pressure

12,1 bar

#### Discharge Coefficient

K = 80 LPM/bar<sup>1/2</sup>

K = 115 LPM/bar<sup>1/2</sup>

#### Temperature Ratings

57°C, 68°C, 79°C, 93°C, and 141°C

#### Finishes

Refer to Table A.

#### Physical Characteristics

Frame .....	Bronze
Button .....	Brass/Copper
Sealing Assembly ..	Beryllium Nickel w/TEFLON
Bulb .....	Glass
Compression Screw .....	Bronze
Deflector .....	Copper



### Operation

The glass bulb contains a fluid which expands when exposed to heat. When the rated temperature is reached, the fluid expands sufficiently to shatter the glass bulb, allowing the sprinkler to activate and water to flow.

### Installation

The Series TY-B Sprinklers must be installed in accordance with this section.

#### General Instructions

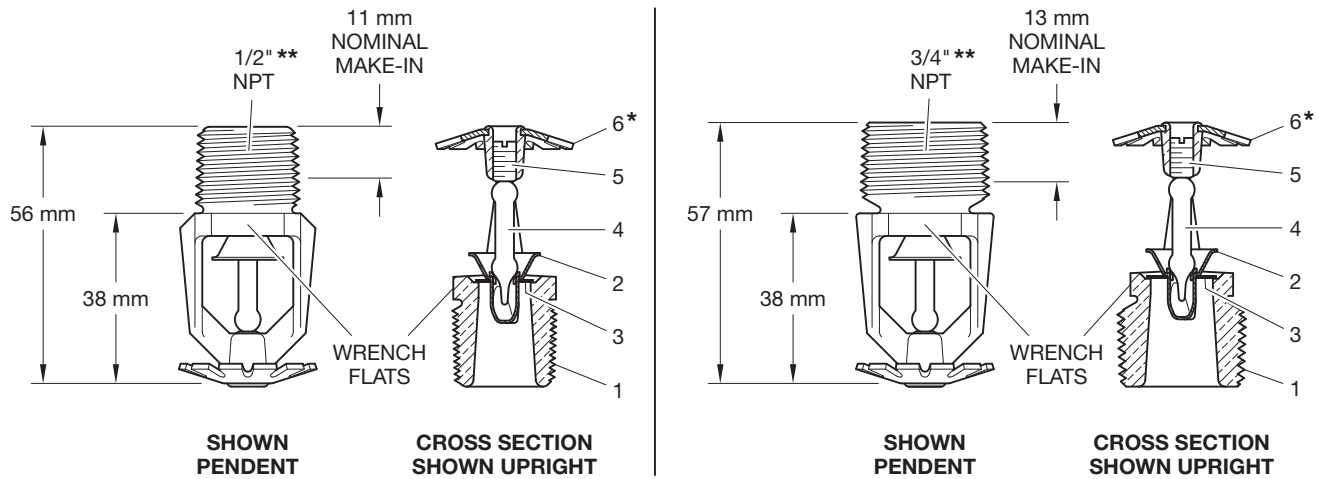
Do not install any bulb type sprinkler if the bulb is cracked or there is a loss of liquid from the bulb. With the sprinkler held horizontally, a small air bubble should be present. The diameter of the air bubble is approximately 1,6 mm for the 57°C to 2,4 mm for the 141°C temperature ratings.

A leak tight 1/2 in. NPT sprinkler joint should be obtained with a torque of 9 to 19 N·m. A leak tight 3/4 in. NPT sprinkler joint should be obtained with a torque of 13 to 27 N·m. Higher levels of torque may distort the sprinkler inlet and cause leakage or impairment of the sprinkler.

\* Temperature rating is indicated on Deflector or adjacent to orifice seat on Frame.

\*\* Pipe thread connections per ISO 7-1 can be provided on special request.

- Components:  
 1 - Frame  
 2 - Button  
 3 - Sealing Assembly  
 4 - Bulb  
 5 - Compression Screw  
 6 - Deflector\*



**FIGURE 1**  
**SPECIAL RESPONSE SERIES TY-B CONVENTIONAL SPRINKLERS**

Do not attempt to make up for insufficient adjustment in the escutcheon plate by under- or over-tightening the sprinkler. Readjust the position of the sprinkler fitting to suit.

The Series TY-B Conventional Sprinklers must be installed in accordance with the following instructions.

**Step 1.** With pipe thread sealant applied to the pipe threads, hand tighten the sprinkler into the sprinkler fitting.

**Step 2.** Tighten the sprinkler into the sprinkler fitting using only the W-Type 6 Sprinkler Wrench (Ref. Figure 2) or W-Type 7 Sprinkler Wrench (Ref. Figure 3). With reference to Figure 1, the W-Type 6 or W-Type 7 Sprinkler Wrench is to be applied to the wrench flats.

## Care and Maintenance

The Series TY-B Sprinklers must be maintained and serviced in accordance with this section.

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, permission to shut down the affected fire protection system must be obtained from the proper authorities and all personnel who may be affected by this action must be notified.

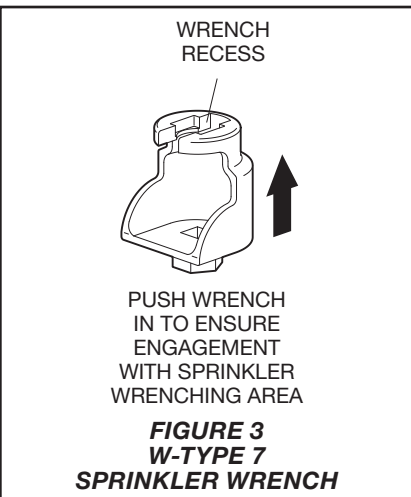
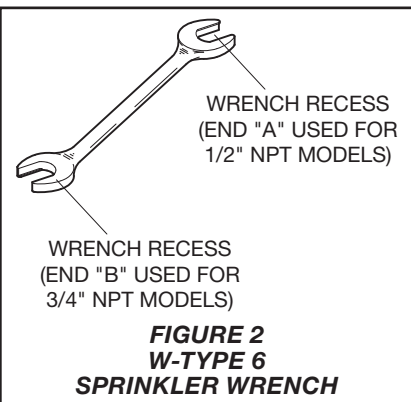
Sprinklers that are found to be leaking or exhibiting visible signs of corrosion must be replaced.

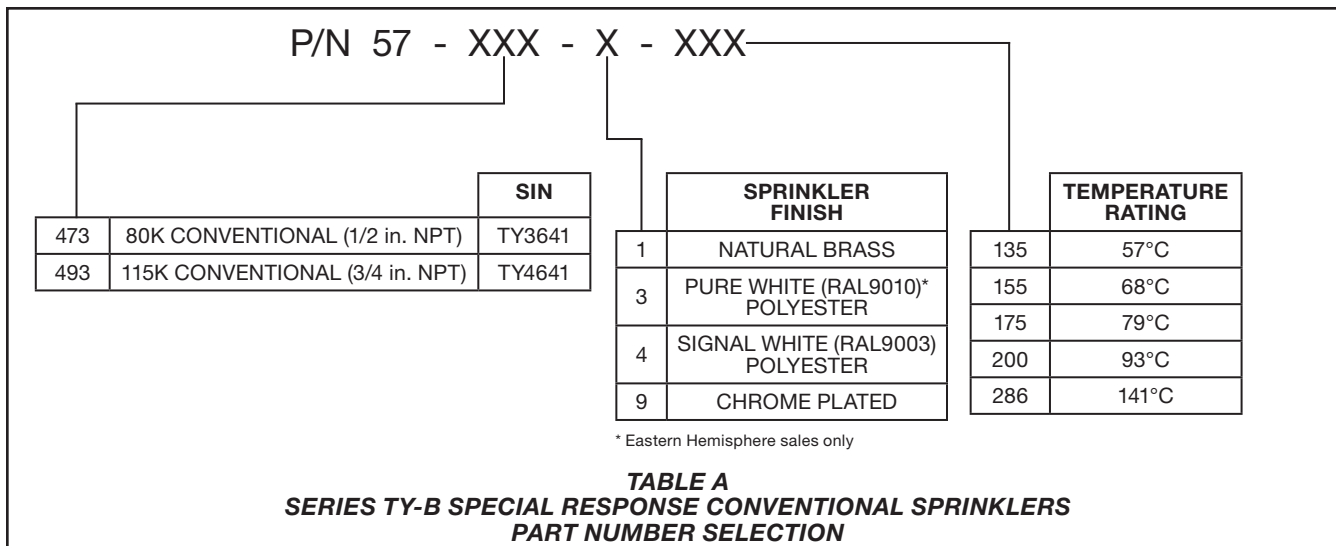
Automatic sprinklers must never be painted, plated, coated or otherwise altered after leaving the factory. Modified sprinklers must be replaced. Sprinklers that have been exposed to corrosive products of combustion, but have not operated, should be replaced if they cannot be completely cleaned by wiping the sprinkler with a cloth or by brushing it with a soft bristle brush.

Care must be exercised to avoid damage to the sprinklers before, during, and after installation. Sprinklers damaged by dropping, striking, wrench twist/slippage, or the like, must be replaced. Also, replace any sprinkler that has a cracked bulb or that has lost liquid from its bulb. Refer to the Installation section for additional information.

The owner is responsible for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the NATIONAL FIRE PROTECTION ASSOCIATION (e.g., NFPA 25), in addition to the standards of any other authorities having jurisdiction. Contact the installing contractor or product manufacturer with any questions.

It is recommended that automatic sprinkler systems be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.





## Limited Warranty

For warranty terms and conditions, visit [www.tyco-fire.com](http://www.tyco-fire.com).

## Ordering Procedure

Contact your local distributor for availability. When placing an order, indicate the full product name and Part Number (P/N).

### Sprinkler Assembly

Specify: (Specify SIN), Series Special Response TY-B Conventional Sprinkler, (specify) K-factor, (specify) temperature rating, (specify) finish, P/N (specify from Table A)

### Sprinkler Wrench

Specify: W-Type 6 Sprinkler Wrench, P/N 56-000-6-387

Specify: W-Type 7 Sprinkler Wrench, P/N 56-850-4-001

